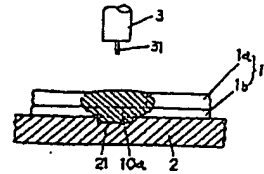
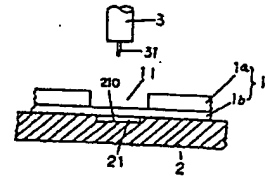


(54) ARC SPOT WELDING METHOD

(11) 6-39542 (A) (43) 15.2.1994 (19) JP  
(21) Appl. No. 4-198180 (22) 24.7.1992  
(71) SEKISUI CHEM CO LTD (72) MASAYA YAMAMOTO  
(51) Int. Cl<sup>5</sup>. B23K9/007, B23K37/06

**PURPOSE:** To prevent arc discharge between works and a backing apparatus by providing a recessed part on a surface part of the backing apparatus to abut on a spot weld zone.

**CONSTITUTION:** The recessed part 21 is provided on the surface part of the backing apparatus 2 abutted on a lower side plate 1b of superposed works 1. When the critical gap thickness for the arc discharge between the works 1 and the backing apparatus 2 is made to T, the arc discharge between the works 1 and the backing apparatus 2 can be obviated by setting the depth of the recessed part 21 so that the distance from the rear of the works 1 to the recessed part bottom 210 of the backing apparatus 2 is made larger than this critical gap thickness T. In addition, at this time, the quantity of molten metal is increased by a capacity part of the recessed part 21 and it is necessary to maintain the same surface between the weld zone upper surface and the work 1 upper surface.



(54) METHOD AND PROCESS DEVICE FOR FORMING OXIDE PASSIVE STATE FILM IN WELD ZONE

(11) 6-39543 (A) (43) 15.2.1994 (19) JP  
(21) Appl. No. 4-304142 (22) 13.11.1992 (33) JP (31) 92p.164376 (32) 29.5.1992  
(71) TADAHIRO OMI(1) (72) TADAHIRO OMI(1)  
(51) Int. Cl<sup>5</sup>. B23K9/035, B23K9/00, C23C8/18

**PURPOSE:** To provide the welding method which can form an oxide passive state film having corrosion resistance and discharging out-gases in an extremely small amt. in a weld zone and near this zone during a welding stage and the process device requiring an ultra-highly clean atmosphere.

**CONSTITUTION:** A back sealing gas consisting of an inert gas contg. 1ppm to 50ppm gaseous oxygen is passed to form the oxide passive state film essentially consisting of chromium oxide on the surface of the weld zone during the welding stage. The back sealing gas consisting of the inert gas contg. 1ppb to 50ppm gaseous oxygen is passed to form the oxide passive film essentially consisting of the chromium oxide on the surface of the weld zone during the welding stage in the process device using welding in the construction of the device.

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(54) WELDING METHOD

(11) 6-39544 (A) (43) 15.2.1994 (19) JP  
(21) Appl. No. 4-198181 (22) 24.7.1992  
(71) SEKISUI CHEM CO LTD (72) SHINOKI MORI  
(51) Int. Cl<sup>5</sup>. B23K9/035, B23K37/06

**PURPOSE:** To smoothly separate a backing apparatus from works after welding is completed by constituting freely peelable the surface part of the backing apparatus to abut on the rear of a place to be joined.

**CONSTITUTION:** The backing apparatus 2 is abutted on the rear side of a place to be spot-welded of the superposed works. The center of a hole 11 for welding is coincident with the center of a copper power filling-up hole 21 of the backing apparatus 2 and a spring 22 is pressurized to bring the upper surface of filled-up copper power 24 into close contact with a lower side steel plate 1b. In welding, even if deposition is generated on the contact interface between the lower side steel plate 1b and the backing apparatus 2, since the backing apparatus 2 part is constituted of the copper power 24 filled up in the hole 21 on the contact interface between the lower side steel plate 1b and the backing apparatus 2, the copper powder 24 is simply deposited on the lower side steel plate 1b part of the contact interface. After welding is completed, the backing apparatus 2 can be smoothly separated from the works and subsequent work can be performed.

